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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/916,063

07/26/2001

Richard W. Anderson

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09/22/2003

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EXAMINER

VARGOT, MATHIEU D

ART UNIT

PAPER NUMBER

1732

DATE MAILED: 09/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,063

Applicant(s)

ANDERSON et al.

Examiner

M. VAR60T

Group Art Unit

1732

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-20 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-20 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulsh et al (see col. 3, lines 54-58 and col. 10, lines 1-10; col. 6, lines 35-55) in view of Pricone et al (see 48, 58, 50 in Fig. 4).

Ulsh et al discloses the basic claimed process wherein a non-glittering (first) retroreflective sheeting is exposed to a heat source and subsequently to pressure at a roller nip to rearrange the cube corner elements thereon to produce a glittering (second) sheeting. See in particular column 10, lines 1-10, wherein the base layer of the sheeting is softened and the cubes are therefor rearranged due to the pressure. At column 6, line 35, the primary reference suggests that the first sheeting would be supported on a backing roll. At best, Ulsh et al fails to explicitly teach that the heating zone would be "extended" and that the first sheeting would be supported on at least one belt. However, these aspects are submitted to be taught in Pricone et al and are also submitted to have been quite well known in the art. To the extent that Ulsh et al does not show an "extended" heating zone, such would have been an obvious modification thereto dependent on the rate of heating the sheet and the speed of the sheet through the zone. In other words, while it is clear that Ulsh et al desires to perform the heating, embossing and cooling in a very short time period

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--ie, in a period of time so short that one of ordinary skill in the art would not consider the heating to be occurring in an "extended" zone-- it is nevertheless believed that modifying the heating to occur over an "extended" zone would have been obvious dependent on cycle time desired and speed of the sheeting through the zone. Obviously, one of ordinary skill in this art would have known that the heating would have been performed to the extent necessary to reform the cube corner elements without compromising the optical properties of the film. Also, as clearly disclosed in Ulsh et al (see column 10, lines 1-2), the instant retroreflective sheeting would not lose its optical properties easily when exposed to heat. Hence, the length/time of the heating zone would be less critical and one of ordinary skill in the art would have been led to use an "extended" heating zone to facilitate uniform heating, albeit at a cost to cycle time. Pricone et al uses a belt embossing means (48) and pressure rolls (58) to emboss an unwound film (13), the belt embosser supporting the film during heating and of course pressure application to make cube corner element sheeting. If it is known to make a cube corner film in such a manner, certainly one of ordinary skill in the art would have found it obvious to have further embossed or textured an existing cube corner film in a similar manner. Ie, the instant belt support as set forth in instant claims 1, 7 and 8 is shown in Pricone et al and it would have been an obvious modification to the roller support surface of Ulsh et al should one have desired a belt in lieu of a roll. Concerning this, see also Pricone et al, Abstract, lines 6-8, wherein the equivalence of rollers and belts as embossing elements is clearly shown. The exact length of the extended heating zone and dwell time for the first sheeting therein would have been parameters well within the skill level of the art

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and readily determined through routine experimentation. Pricone et al shows unwinding (36) and take-up rolls (col. 6, lines 44-45). It is submitted that using a dual belt processing is well known in the art and would have been an obvious expedient over a single belt dependent on support needed for the sheeting.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional prior art teaches embossing or thermoforming thermoplastic films using heating zones prior to the embossing/forming.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Vargot whose telephone number is (703) 308-2621.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

M. Vargot

September 16, 2003

M. Vargot
MATHIEU D. VARGOT
PRIMARY EXAMINER
GROUP 1300
9/16/03